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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/804,169

03/19/2004

Ning Li

58268.00368

7402

32294

7590

10/05/2004

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EXAMINER

MOTTOLA, STEVEN J

ART UNIT

PAPER NUMBER

2817

DATE MAILED: 10/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/804,169	<b>Applicant(s)</b> LI ET AL.	
	<b>Examiner</b> Steven J. Mottola	<b>Art Unit</b> 2817	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 September 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 48-90 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 56-81 and 84 is/are allowed.
- 6) ☒ Claim(s) 48,49,53-55,82,83,85-87 and 90 is/are rejected.
- 7) ☒ Claim(s) 50-52,88 and 89 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

The disclosure is objected to because of the following informalities: on page 5, paragraphs 18,19 & 20 of the specification, "ranger" should read --range--. In claim 56, 4th from last line, "input" should read --output--. In claim 58, 2<sup>nd</sup> from last line, "said load resistors" should read --said differential resistors--.

Appropriate correction is required.

Claims 82,83,85 & 90 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The last paragraph of claim 82 states that the step of amplifying the thin device signal "includes a step of adjusting a gain of said thin device signal to differential transistors" when it appears that the gain of the differential transistors performing the amplification of the thin device signal is adjusted rather than the signal fed to them. There is no antecedent basis for any of the common mode ranges defined in claim 90.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 48,53-55 and 86 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen. Refer to fig. 4 of Chen. Treating independent claims 48,66 and 86 first, a differential amplifier arrangement is disclosed including complementary input pairs MP1,MP2 & MN1,MN2 that have their inputs and outputs (via current mirrors 40,42) tied together. Thus this arrangement may be read as the first stage claimed, while the

cascode transistors to the right of the figure that receive the output signals from the input pairs may be read as the second stage claimed. Regarding the voltage sources of claim 48, these may be read on VDD,VSS and Vref of Chen. Regarding claims 53-55, the input pairs are complementary P and N types. Current source 30 of Chen may be read as the first current source claimed in claim 55 as it will supply current to the P type pair and transistor MN4 as the second current source claimed in claim 55 as it will supply current to the N type pair.

Claims 86-87 are rejected under 35 U.S.C. 102(b) as being anticipated by Huijsing et al.

The language of the like rejection of the first Office action is hereby incorporated herein by reference. The arguments presented against the rejection are not understood, since the claims do not specify that the input stages are either a first or second conductive type, only that one stage is of a first conductive type and the other of a second conductive type, and this is clearly shown by Huijsing et al. since Q1,Q3 are PNP and Q2,Q4 are NPN.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 49 and 87 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen.

The difference added by these claims is the load resistors claimed to be across the outputs of the first stage, but the trim circuits 36 of Chen is connected across the outputs of the input pairs and would be functionally equivalent to the claimed resistors; indeed, in another embodiment (fig. 10) of Chen, resistors are used as the trim circuit (see col. 10, line 5 of Chen).

Claims 50-52 and 88-89 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

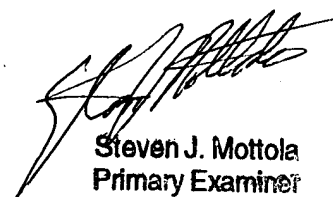
Claims 56-81 and 84 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven J. Mottola whose telephone number is 571-272-1766. The examiner can normally be reached on M-Th from 8 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal, can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2817

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Steven J. Mottola  
Primary Examiner